

REMARKS

This Amendment is in response to the February 27, 2006 Office Action in the above application. The Applicant has received and fully considered the Office Action and its rejections.

Claims 1, 4, 5, 14, 19 and 22-24 are rejected under 35 USC 102(b) as being anticipated by Pelet (French Patent No. 83.262). However Pelet differs significantly from the present invention. As previously pointed out, claims 1 and 19 included the limitation of airflow exiting radially outward from the passageway. The Office Action refers to Figure 17 in support of the rejection stating the airflow was radially outward in the device in Pelet. However, on page 2, column 2 of Pelet in the third paragraph from the end which begins "Figure 17" the patent provides a brief description of Figure 17. In that description it states that the turbine has an outward flow. The outward flow from the turbine should not be confused with airflow exiting radially outward from the passageway or aircraft as found in claims 1 and 19.

The outward flow from the turbine in Pelet is divided into a peripheral lift and propulsion. In looking at Figure 17 it can be seen by the arrows drawn through the lift duct 105 that the majority of the lift is generated by directing the airflow downward. Any benefit of lift generated by the airflow acting on the equivalent of the curved surface in Pelet would be cancelled out by the same air flow acting on the underside of the wing 106. See Exhibit A - Affidavit of Michael Higgins.

Other embodiments disclosed in Pelet suffer from the same problem. See Exhibit A – Affidavit of Michael Higgins. For example, the embodiment shown in Figures 1-10 shows the radial outward exhaust from the turbine entering the lift duct at a nearly perpendicular angle to the duct. This will cause the majority of the air exiting the turbine 16 to blow across the duct and

strike the bottom surface of the wing 19. The air which enters the duct from above and becomes entrained in this exhaust also will flow along the underside of the wing 19. This causes an increase in the speed of the airflow across the bottom side of the wing 19. Due to Bernoulli's principle the increased airflow across the bottom side of the wing 19 will cause the pressure to drop more on the underside of the wing 19 which will more than cancel out and greatly exceed any lift which might be created by the increased flow of air across the top of the curved surface 22. It is because the majority of the exhaust and entrained air will be flowing across the underside of the wing 19 versus across the top of the curved surface 22. As best seen in Figure 3 of Pelet, the lift must be generated by the direct force of the airflow downward as it exits the duct.

Propulsion of the devise shown in Figure 17 of Pelet is achieved by directing air flow from the turbine to the conduits of horizontal propulsion 107 and 108. According to the first full paragraph on page 7, column 2 of the patent, the upper conduit of propulsion 107 does contribute some to the lift by the increased speed of flow across the top surface of the wing 106. Lift generated by airflow across top of the wing 106 in Pelet should not be confused with the lift generated in the present invention by the airflow across the curved surface as claimed in claims 1 and 19.

In summary the device shown in Figure 17 relies upon direct downward thrust through the conduits of lift 105 to generate the majority of the lift with a small component of lift being generated by the conduit of propulsion 107 acting on the top surface of the wing 106 any lift generated by the air flow through the conduits of lift 105 attributable to Bernoulli's principle acting on the interior surface of that conduit are cancelled out. This is in contrast to the present invention as claimed in Claim 1 and 19 which includes the limitation of the lift being generated

and attributable to Bernoulli's principle acting on the curved surface and then exiting the aircraft radially outward.

Claims 4, 5 and 14 of the present invention all depend from Claim 1. As such, they include all the limitations found in the Claim 1. Claims 22 and 24 both depend from Claim 19 and as such they contain all of the limitations found in Claim 19. For the reasons cited above, the Applicant respectfully requests the rejection of Claims 1, 4, 5, 15, 19, 22 through 24 under 35 USC 102(b) based upon Pelet to be withdrawn.

Claims 2, 3, 6, 7, 18, 20, 21, 28, 29 and 35 have been rejected under 35 USC 103(a) as being unpatentable over Pelet in view of Rebasti (U.S. Patent No. 2,996,266). Claims 2, 3, 6, and 7 depend from claim 1. Claims 20, 21, 28 and 29 depend from claim 19. As dependent claims they contain all of the limitations contained in the claims from which they depend. This includes the limitations found in Claims 1 and 19 which are not present in Pelet as discussed above. Claims 19 and 35 are independent but also include the limitations of the airflow exiting the passageway radially outward and lift being generated due to Bernoulli's principle as the airflow crosses the curved surface. As discussed above these limitations are not present in Pelet.

The present invention as claimed in Claims 2, 3, 6, 7, 18, 20, 21, 28, 29 and 35 answer a long felt need in the field of aeronautics by providing an extreme amount of lift generated by relatively small amount of horsepower not found in the prior art. The Affidavit by Michael Higgins attached as Exhibit A provides the details of this long felt need in the field and the extraordinary benefits of the present invention.

Pelet issued as a patent in 1964. Rebasti issued in 1961. Had it been obvious to those skilled in the art to combine these two patents in order to obtain the benefits of the present invention and answer the long felt needs of the aeronautical community, certainly one of those

individuals skilled in the art would have combined these two references in order to obtain those benefits sometime during the approximately 42 years since the issuance of Pelet.

For these reasons, the Applicant respectfully requests the rejections of Claims 2, 3, 6, 7, 18, 20, 21, 28, 29 and 35 under 35 USC 103(a) as being unpatentable over Pelet in view of Rebasti be withdrawn.

Claims 8, 9, 10, 15, 16, 17, 25, 26 and 27 are rejected under 35 USC 103(a) as being unpatentable over Pelet. Claims 8, 9, 10, 15, 16 and 17 all depend from Claim 1. Claims 25, 26 and 27 all depend from Claim 19. As discussed above, Pelet fails to disclose all of the limitations found in Claims 1 and 19.

Claims 18 and 35 are both independent and contain the same limitation found in Claims 1 and 19 of the airflow exiting the passageway radially outward and lift being generated by Bernoulli's principle as air flows across the curved surface.

Pelet gives no direction to apply the technology disclosed in that patent to other modes of transportation. The benefits discussed in Michael Higgins affidavit are equally valuable in these other modes of transportation and provide solutions to long felt needs in those industries of providing power to wheeled vehicles as well as watercraft and hovercraft with relatively small horsepower providing a greatly enhanced power.

For the reasons outlined above, the Applicant respectfully requests that the rejection of Claims 8, 9, 10, 15, 16, 17, 18, 25, 26, 27 and 35 under 35 USC 103 as being unpatentable over Pelet be withdrawn.

Claims 11, 12 and 13 were rejected under 35 USC 103 as being unpatentable over Pelet in view of Vass (U.S. Patent No. 5,503,351). Claims 11, 12 and 13 all depend from Claim 1. As mentioned above, Pelet fails to disclose all the limitations found in Claim 1. Vass also fails to

disclose the limitation of lift being generated by Bernoulli's principle as air is blown across the curved surface.

Also as outlined in Michael Higgins affidavit, the present invention answers the long felt need in aeronautics as well as automotive and watercraft industries of providing a great deal of lift or thrust from a rather modest amount of horsepower. Using the present invention the ratio of pounds of thrust per horsepower is much greater than what is seen in the prior art. Had it been obvious to one skilled in the art to combine the inventions disclosed by Pelet and Vass surely someone skilled in the art would have combined the two in the ten years since Vass has issued as a patent in order to obtain the benefits of the present invention and to fill the long felt needs in these industries. For the reasons outlined above, the Applicant respectfully requests that the rejection of Claims 11, 12 and 13 under 35 USC 103 as being unpatentable over Pelet in view of Vass be withdrawn.

Claim 30 was rejected under 35 USC 103(a) as being unpatentable over Pelet in view of Sakamoto (U.S. Patent 4,941,628). Claim 30 depends from Claim 19. As such it contains all the limitations of Claim 19. Both Pelet and Sakamoto fail to disclose the limitations of the airflow exiting the passageway radially outward and lift being generated by using the Bernoulli principle by blowing air across the curved surface. Pelet relies upon direct thrust downward with a small amount of lift being generated by propelling force being blown across the top surface of the wing. Sakamoto generates lift by increasing the pressure below the principle wing through the exhaust of mixed gases from the turbine. The device in Sakamoto does not contain a coanda or curved surface.

Further, the present invention answers long felt needs in the aviation, automotive, watercraft and hovercraft industries by providing a great amount of lift or force out of a

relatively small amount of horsepower. Had the present invention truly been obvious to one skilled in the art, someone would have combined Pelet and Sakamoto in more than fifteen years since Sakamoto has issued as a patent in order to obtain the benefits of the present invention and meet the long felt needs in the field.

For the reasons cited above, the Applicant respectfully requests that the rejection of Claim 30 under 35 USC 103 as being unpatentable over Pelet in view of Sakamoto be withdrawn.

Claims 31, 32, 33 and 34 are rejected under 35 USC 103(a) as being unpatentable over Pelet and Sakamoto and further in view of Shuba (U.S. Patent 5,261,228). Claims 31, 32, 33 and 34 all depend indirectly from Claim 19. As discussed above Pelet fails to disclose all the limitations of Claim 19. Both Sakamoto and Shuba also fail to disclose the limitations of the airflow exiting radially outward from the passageway and lift or force being generated due to Bernoulli's principle as air is forced across the curved surface.

The bypass disclosed in Shuba is for a jet engine. As such it is designed for the more efficient operation and control of the jet engine. It is not necessary for the control of air flowing across flight surfaces. As such its art differs greatly from the art addressed by the Pelet and Sakamoto, namely designing the flow across flight surfaces. The Applicant is unable to find anything in these three cited references that would suggest the combination of any one of these applications with any of the other two let alone all three being combined together.

The present invention provides a solution to the long felt needs within the aerospace, automotive, watercraft and hovercraft industries as outlined in Michael Higgins affidavit. As such had the present invention as claimed be obvious to one skilled in the art an inventor would

have already combined the three pieces of prior art, Pelet, Sakamoto and Shuba, to come up with the present invention to obtain the benefits and provide a solution to these long felt needs.

For the reasons outlined above, the Applicant respectfully requests that the rejection of Claims 31, 32, 33 and 34 under 35 USC 103(a) as being unpatentable over Pelet and Sakamoto and further in view of Shuba be withdrawn.

It is the applicant's belief the amendments herein place the application in condition for a Notice of Allowance which is respectfully requested.

Enclosed is a Petition and Fee for a One-Month Extension of Time. Please charge Deposit Account No. 50-1971 the amount of \$60.00 to cover this extension of time fee. Further, any additional fees required by this paper or credit any overpayment to Deposit Account No. 50-1971.

Should any other amendments be necessary to place the application in condition for a Notice of Allowance, Examiner Barefoot is invited to call the undersigned at the below noted telephone number.

Respectfully submitted,

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